

## AMENDMENTS TO THE CLAIMS

Claims 1-3 (Canceled)

4. (Currently amended): The apparatus of claim 2 A sensor head apparatus employable with a multi-parameter monitoring tool assembly, comprising:  
a sensor head body configured with a plurality of ports, where each of the plurality of ports is configured to engage and interconnect with an interchangeable sensor head component,  
whereby each of the plurality of ports is sized to receive one end of the interchangeable sensor head component, and engagement and disengagement of the interchangeable sensor head component within the plurality of ports occurs through application of a linear force upon the interchangeable sensor head component;

wherein the plurality of ports are each configured to receive and engage an insertable portion of the interchangeable sensor head component, wherein a radially compressible sealing device is disposed around the insertable portion; and

wherein the sensor head body further includes at least one atmospheric pathway incorporated therein which interconnects the plurality of the ports so as to distribute atmospheric gasses which may be compressed during engagement and interconnection of the interchangeable sensor head components in any of the plurality of ports.

Claims 5-6 (Canceled)

7. (Currently amended): The apparatus of claim 6 A sensor head apparatus employable with a multi-parameter monitoring tool assembly, comprising:  
a sensor head body configured with a plurality of ports, where each of the plurality of ports is configured to engage and interconnect with an interchangeable sensor head component,  
whereby each of the plurality of ports is sized to receive one end of the interchangeable sensor

head component, and engagement and disengagement of the interchangeable sensor head component within the plurality of ports occurs through application of a linear force upon the interchangeable sensor head component;

wherein the interchangeable sensor head component comprises at least one of: an interchangeable sensor and an accessory;

wherein the interchangeable sensors may comprise at least one of: active and passive sensors; and

wherein one or more of the plurality of ports are configured to engage and interconnect with different types of the sensor head components including: the active sensors, the passive sensors, and the accessories.

Claims 8-12 (Canceled)

13. (Currently amended): The apparatus of claim 12-A sensor head apparatus employable with a multi-parameter monitoring tool assembly, comprising:  
a sensor head body configured with a plurality of ports, where each of the plurality of ports is configured to engage and interconnect with an interchangeable sensor head component,  
whereby each of the plurality of ports is sized to receive one end of the interchangeable sensor head component, and engagement and disengagement of the interchangeable sensor head component within the plurality of ports occurs through application of a linear force upon the interchangeable sensor head component;

wherein the sensor head body further includes a circuit board device attached thereto,  
wherein the circuit board device includes a plurality of electrical interconnection plugs mounted thereon for providing the interconnection with the interchangeable sensor head components; and  
wherein the plurality of ports pass from one side of the sensor head body to an opposing

side, and the circuit board device is configurable to attach to the opposing side of the sensor head in manner such that the interconnections plugs are positionable in the plurality of ports and provide an environmental seal.

Claims 14-15 (Canceled)

16. (Currently amended): The apparatus of claim 15 A sensor head apparatus employable with a multi-parameter monitoring tool assembly, comprising:  
a sensor head body configured with a plurality of ports, where each of the plurality of ports is configured to engage and interconnect with an interchangeable sensor head component,  
whereby each of the plurality of ports is sized to receive one end of the interchangeable sensor head component, and engagement and disengagement of the interchangeable sensor head component within the plurality of ports occurs through application of a linear force upon the interchangeable sensor head component;

wherein the sensor head body is further configured to attach to an enclosure device,  
wherein the enclosure device comprises at least one of: a restrictor, a calibration container, and a flow cell; and

wherein the enclosure device is connectable to at least one other device which is positionable proximate to the sensor head body.

17. (Original): The apparatus of claim 16 wherein the at least one other device comprises at least one of: an additional sensor head which includes at least one port for receiving at least one of the interchangeable sensor head components and a stirring device.

Claims 18-43 (Canceled)